

Cracklin' Static

January 2020 Edition



Breakfast Meeting: Sat, January 4th,

Boomtown Casino Hotel
Events Center
I-80 at Exit 4 in Verdi

Breakfast Buffet – 7:30am - \$12
General Meeting – 8:00am

We are going to do a combined meeting with CARS and the presentation is Jeff Brown K5BLS who will do a short presentation of the CARS System Fusion radio network.

SNARS NET on DMR – Tuesday 8pm

DMR Talk Group: 31328 SNARS

SNARS Treasury Dec Closing Balances

Account	12/29/2019
Operating	\$5,829
Savings	\$9,206
Self Insurance	\$6,678
Convention	\$4,295
PayPal	\$1,705

Total	\$27,713
Net Income	\$46
YTD Net Income	\$2,122
Renewals	17

SNARS Membership –

Extra	136	36%
Technician	117	31%
General	112	29%
Advanced	13	3%
License Expired	2	1%
TOTAL	380	

SNARS ARRL Members

Regular	215	56%
Life	40	11%
TOTAL	255	67%

President's Voice

President John Byerly, N7ROJ

Email: mtnlion@gmail.com



Happy Holidays everyone! I hope everyone enjoyed the holidays, and time with friends and family! I know I have enjoyed my time as well!

Our electronic voting was a great success! It saved the club approximately \$400 from not having to mail out ballots, not to mention the instant results on the screen. Congratulations to

the selected board members!

At the next board meeting, the directors will be voting for the club president. Then the elected president will select their staff and close the board meeting. Then the newly elected president will open the board meeting with the newly appointed staff and conduct a regular board meeting.

I intend to run for club president again, but if someone else is selected, I will support them completely as a member of the board. It has been an honor and privilege serving the club as your president either way.

Happy New Year, and all the best in 2020!

John/N7ROJ



PO BOX 7727 Reno NV 89510
 Yearly Dues: \$40.00 Individual • \$50.00 Family
 775.453.4142 <http://snars.org>

2019 Officers

President.....John Byerly, N7ROJ
 Vice-President.....Jim Shepherd, W6US
 Treasurer.....Bill Jones, AE7OX
 Secretary.....Anthony Marcin, W7XM
 DirectorWes Vick, KG7QXE
 DirectorJohn Miller N7JDM
 DirectorBarry Bettman, K6ST

2019 Staff

Cracklin Static..... Howie Holden, WB2AWQ
 W7TA Trustee Peter DeBay, KE7VSR
 KR7ENO Trustee Howie Holden, WB2AWQ
 Control Operator Pat Sheehan, W7DED
 Historian Jon Fox, KF7KTC
 Tech Team Lead Pat Sheehan, W7DED
 Membership..... Kim Farnham, KG7TMA
 PIO Greg Krantz, NT7Q
 VE Coordinator..... Bill Nichols, NN7K
 Meeting Greeter..... Bill Jones, AE7OX
 Noon Net Manager..... Wes Vick, KG7QXE
 DMR Net Manager Anthony Marcin, W7XM
 Reno Ham Swap Vacant
 Webmaster Erik Andreasen, K6CZH
 Club Sales Manager.....Julie Dodge, N7JWL
 Recording Secretary.....Doug Edmondo, W7DBE

Cracklin Static Publication

Editor: Howie Holden **WB2AWQ** - holden7471@msn.com
 Cracklin' Static is the Newsletter of, and sponsored by the Sierra Nevada Amateur Radio Society. Opinions expressed herein are those of the editors and contributors and should not be considered as official expressions of the Club Officers, Staff or Club Members, or as endorsements by same.

Material for publication may be edited to enhance readability or to save space. We reserve the right to use whatever font size, line spacing or other tools as may be required to publish this Newsletter. **Deadline for input to the newsletter is 1500 hours on the Sunday** prior to the 1st Saturday of each month.

SNARS Wide Area Linked System

147.030 + PL 123.0	Sparks, Fernley, Fallon	Online
147.210 + PL 100.0	Reno, Sparks	Online
147.150 + PL 123.0	Lake Tahoe, Truckee, Carson	Online
146.925 -?L 123.0	Lovelock, Fallon	Online
146.670 -?L 123.0	Winnemucca	Online
444.875 + PL 100.0	Yerington	Online
444.125 + PL 123.0	Reno Sparks	Offline

DMR Systems

444.925 + CC 1	Reno, Sparks	Online
444.825 + CC 1	Dayton, Fallon, Carson	Online
443.925 + CC 1	Lake Tahoe, Truckee, Carson	Online
443.950 + CC 1	Incline Village	Online
442.875 + CC 1	Sparks, Fernley, Fallon	Online
442.850 + CC 1	Downtown Reno	Online
441.950 + CC 1	Fallon, Fernley	Offline

Fusion Systems

146.610 - PL 123.0	Reno, Carson, Dayton	Online
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IRLP / EchoLink Systems

147.300 + PL 123.0	Reno, Sparks	Online
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Packet / APRS

145.050 - RNO	Reno, Carson, Dayton	Online
145.050 - ROSE	Lake Tahoe, Truckee. Carson	Online
144.390 - TOULON	Lovelock, Fallon	Online

Standalone Systems

147.390 + PL 100.0	Reno, Carson, Dayton	Online
443.075 + PL 123.0	Reno, Carson, Dayton	Online
927.0875 + PL 114.8	Reno, Carson, Dayton	Online



Online



Offline



Not Linked

Thank you to our Sponsors/Supporters



Weekday on the SNARS Linked System

147.030 + PL 123 – Sparks/Fernley
 147.150 + PL123.0 – Lake Tahoe / Truckee
 147.210 + PL 100.0 - Reno
 444.875 + PL 100.0 - Yerington
 146.925 - 123.0 – Lovelock / Fallon
 146.67 – PL 123.0 - Winnemucca

Monday through Friday @ 12:00pm

Open to all amateur radio operators. A general informational net for the amateur radio community of Northern Nevada and Eastern California. Radio Checks and Questions are welcomed.

Nets on the SNARS Linked Systems

147.210 + 100.0 | 147.030 + 123.0 | 147.150 + 123.0
 147.670 – 123.0 | 146.925 – 123.0 | 444.875 + 100.0

ERC Net for NV and Northern CA	Monday @ 9:15pm
N. Western NV ARES Net	Thursday at 7:30pm
Northern Nevada Preppers Net	Wednesday @ 8:00PM
Hospital Net	Friday @ 10:00AM

Nets on IRLP (GSR) System

Repeater: 147.300 + 123.0

Amateur Radio Newslite	Monday - 8:00PM
Nevada Skywarn Net	Wednesday - 7:00pm
Nevada State ARES Net	Thursday - 7:00PM

Nets on Simplex/HF

Jefferson Noon Net	7.204 LSB	Daily - 12:00pm
6 Meter Net	50.350 USB	Tuesday – 8:00pm
2 Meter Week Signal	144.250 USB	Wednesday - 8:00PM
2 Meter Simplex Net	146.500 FM	Thursday – 8:00PM
10 Meter Net	28.350 USB	Sunday – 2:00PM

SNARS Weekly DMR Net – Tuesdays
8:00PM

SNARS Talk Group 31328

Open to Members and Guests. A general information net each week on DMR.

SNARS CALENDAR

Ham Radio Night at the REOC Wednesday, February 5, 6 PM Washoe REOC 5195 Spectrum Blvd, Reno NV

SNARS Board Meeting Wednesday January 8, Chin-Chin 222 Los Altos Pkwy, Sparks NV

QCWA Nevada Chapter meeting Saturday, January 11, 11AM to 12 Noon Famous Dave's Bar-B-Que, 4925 Kietzke Ln, Reno, NV

Next SNARS Breakfast Meeting – Saturday February 1, 8 AM Boomtown Casino Hotel Events Center I-80 at Exit 4, Verdi

WELCOME NEW MEMBERS

December, 2019

Jeff	Hilliard	AK6OK
Charles	Fonger	N7CJF
Kirk	Sullivan	SWL
Jay	Mazure	WT8K
Aaron	Phillips	KJ7KXJ
Vladimirs	Petrocenko	KN6FPL

THE NAME OF THE GAME

Jim Shepherd, W6US??vjims@gmail.com

RTTY AND OTHER DIGITAL MODES

Last month our Editor featured an old mechanical monster, the RTTY teletype terminal. It got hams started using digital modes back in the '50s and has led us to the other more modern modes. The old terminals were inexpensive or even free and got a lot of folks on the air. With the advent of personal computers, hams quickly programmed them to encode and decode RTTY signals, and it was easier to get on the air with this mode.

Virtually everyone now is using computers to use this mode. The 45.5 baud signal rate is about 60 words a minute which allows for a good conversational throughput. The signal consists of two tones, normally separated by 170 Hz. 1445 Hz is the Mark and 1275 is the Space and these two tones are arranged in 5 tone sequences that represent the letters, numbers and control characters in the Baudot code. You can hear RTTY in this video, https://www.youtube.com/watch?v=d1xvcn1n_Rc and then you can find it on the air this weekend in the upper parts of the CW segment of 20 and 40 meters. Once you have heard it, you should be able to find it on the bands.

There are lots of programs out there that will allow you to use RTTY. Some of the more popular free programs are FLDIGI, and MMTTY, both of which interface nicely with the N1MM logging software. These programs use a soundcard to produce the tones and receive the audio from your radio. Newer radios have a built in soundcard and only a USB connection is needed from your computer to the radio. Older radios need some sort of interface to get the audio to and from the radio as well as handling the keying of the transmitter. The same connections will work for most of the other digital modes and audio connections for recording and sending prerecorded sounds from your computer.

Tuning is important and most of the programs will have a waterfall display that will allow you to 'click' on a signal and it will then tune the radio to match that frequency. Since most of the programs use AFSK, they may just move the Mark/Space frequencies up or down a few Hertz to exactly match the received signal. Larger moves may be done by the CAT controls between the radio and computer if available on your radio. There is no error correction in RTTY, so garbled copy, especially on weak signals, is very common, especially if you see strange characters in words or callsigns...

One of the very nice things about using a computer program for RTTY is that you can set up messages in advance so you

can just click on a button or hit a function key to send items like a CQ string, your name and location, your rig and antenna setup, and a contest exchange string. You can also click on parts of the received message to add them to some of these strings. For really important info, like your callsign, put it twice in the message to avoid the garble...

This weekend is the annual ARRL RTTY Roundup, and there will be lots of RTTY and other digital mode operators all around the world on the air. It is a great time to try RTTY. It runs from 1000 Saturday until 1600 on Sunday, and you can use all digital modes in addition to RTTY. Complete information about this event can be found at <http://www.arrl.org/rtty-roundup>

PSK31 is another popular digital mode, and the Digipan and FLDIGI programs will let you do it easily. By using Phase Shift Keying it has better weak signal capabilities, and has been a favorite for DX using only 25 watts. It is found on the bands just below the FT8 frequencies. The introduction of the WSJT modes has cut into the popularity of this mode, but there should be some amount of activity this weekend for the Roundup.

FT8 and FT4 will be heavily used this weekend as they are totally error corrected and usable at low signal levels which allows them to make worldwide contacts in poor conditions. These are weak signal modes, not QRP modes, most operators will be running 50-100 watts. The WSJT program version 2.1.2 is the software to use—older versions don't work properly, and may not let you decode or be decoded... you can download the current version at <http://physics.princeton.edu/pulsar/K1JT/wsjitx.html> Be sure to use the 'Setting' 'Advanced' tab to set to the ARRL Roundup and enter your section. For logging, the N1MM program will let you run these modes from 'inside' of it by typing 'FT8' in the entry box. These modes are not conversational modes as they have a 13 character limit on each transmission.

Other modes like Olivia, Contestia, Packet, Hellschreiber, Domino, Thor, etc may be heard on the bands. These all have their features and adherents, and can add to your fun with ham radio. More modes are showing up as hams keep experimenting.

One caution, most of the digital modes are 100% duty cycle while they are transmitting. Some radios do not like this and could be damaged if you run full power. Turn down the power and have some fun!

SNARS LOGO ITEMS

This year we are celebrating our 50th year by providing many ways to commemorate this occasion by imprinting our 50th



Stickers \$1.00 Each



16oz Coffee Mugs \$8.00



Hats \$10.00



Club Badge \$15.00

Order at
<http://snars.org/store/badge-order>

Items are available at the monthly meetings, events or online (coming soon) <http://snars.org/store>

MIKE'S MISSIVES CHAPTER FORTY EIGHT

Mike Katz, N7MSK

Amateur radio operators use Q signals (or Q codes) as shorthand to speed up communication. Each Q signal represents information: advice, an answer, or a call for action. You turn the signal into a question by adding a question mark right after the Q signal. Here is a short list of the most commonly used Q-Codes for Key and voice:

Q Signal	Meaning
----------	---------

QRL	Is the frequency busy? The frequency is busy. Please do not interfere.
QRM	Abbreviation for interference from other signals.
QRN	Abbreviation for interference from natural or human-made static.
QRO	Shall I increase power? Increase power.
QRP	Shall I decrease power? Decrease power.
QRQ	Shall I send faster? Send faster (___ words per minute [wpm]).
QRS	Shall I send more slowly? Send more slowly (___ wpm).
QRT	Shall I stop sending or transmitting? Stop sending or transmitting.
QRU	Have you anything more for me? I have nothing more for you.

Q Signal	Meaning
----------	---------

QRV	Are you ready? I am ready.
QRX	Stand by.
QRZ	Who is calling me?
QSB	Abbreviation for signal fading.
QSL	Did you receive and understand? Received and understood.
QSO	Abbreviation for a contact.
QST	General call preceding a message addressed to all amateurs.
QSX	I am listening on ___ kHz.
QSY	Change to transmission on another frequency (or to ___ kHz).
QTH	What is your location? My location is _____

From:

Amateur radio Q Codes

w5www@yahoo.com

NAME THAT RIG

(Answer on page 10)



W7SSB's FUN STUFF

Got NOISE ?

What is it, Where is it, How do I find it and How do I fix it. Sooner or later your going to encounter noise at your station.

It may come from right in your shack or home or neighbor or neighborhood.

Most hams don't realize that there are some simple tools to help you track down the offender.

Local noise in the home the simplest way to track it down start unplugging things.

LED lamps, digital tv, gold fish bowl filters, wireless systems, alarms, switching power supplies , wall warts, microwave oven, garage door openers, etc. A common cause of noise is the door bell transformer arcing over.

Outside the house is a different story. Here is where some simple equipment can be used to track down the culprit.....

RFI - What is it.

https://en.wikipedia.org/wiki/Electromagnetic_interference

<http://www.arrl.org/radio-frequency-interference-rfi> Great article.

How to find it.

<http://www.arrl.org/files/file/RFI/FOESTER.PDF>

<http://www.arrl.org/news/view/amateur-radio-sleuthing-pins-down-source-of-strange-rf-interference> Interesting story.

<https://www.youtube.com/watch?v=NibgLgYiQtU> Please watch complete video.

Power line noise.

<http://www.arrl.org/power-line-noise>

Tools to find it.

Sometimes a simple am portable radio will do the trick. Other times you may need something designed for this purpose.

MFJ has some of the broadest line of products for this endeavor.

The MFJ 856, MFJ 852 with MFJ 1767, MFJ 5008, MFJ 805 products.

Each product has its own use in finding RFI sources.

End game.

Sometimes you just can't find the source or it can't be rectified.

Example : Electric fence or something in your neighbors home or garage (battery charger or solar system).

Clubs should have training classes on RFI hunting.

<https://www.youtube.com/watch?v=aT-EFcZ7hbA> Please watch!

There is a lot of information and books at the ARRL covering this subject.

I suggest every radio club have a couple of RFI detector tools that members can borrow

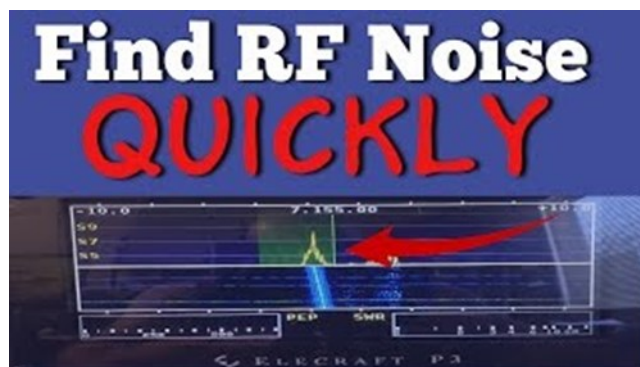
and use.... I hope this article helps ?

If anyone has any questions, you know where to find me.

Don W7SSB

Attachments area

[Preview YouTube video Do You Have RF Noise?, SideKar for KX2 KX3 Preview -K6UDA Radio EP 15](#)



[Preview YouTube video ARRL: Locating Power Line Noise with Mike Gruber, W1MG](#)



YOUR VOTE

Below are the results of the SNARS 2019 Election of Board of Directors. The upper section breaks down the vote by percentages of each candidate, top to bottom. The lower section shows the timeline of the voting from the time it was opened until it was closed at 8AM Saturday, December 7, 2019. The total of eligible members at the call of the election was 365. Of those, 47 percent voted. There were four open slots on the board to be filled. Pursuant to the By-Laws of the club, the Board will meet on January 8, at Chin Chin, Sparks NV to elect a President. The President will then select people to fill the various positions (VP, Secretary, Treasurer). The rest of the Board then sits as members-at-large.

2020-2022 Board of Directors Election Completed

Results

Board of Director Election, 2020-2022

Option	Votes	
 Bill Jones, AE7OX	20%	132
 Barry Bettman, K6ST	20%	131
 Tony Marcin, W7XM	19%	127
 Jim Shepherd, W6US	16%	109
 Douglas Edmondo, W7DBE	9%	57
 Nick Manzo, W7NIK	8%	56
 Bill Nichols, NN7K	8%	53



2020-2022 Board of Directors Election Completed

Overview

This election ended on 12/7/19, 8:00 AM. [View Results »](#)

Ballots Submitted By Date



YOUTH INVOLVEMENT

YOUTH RUNS SNARS NOON NET

Two new youth hams licensed 5 months ago, Mckenzie KJ7IRT and Hunter KJ7IRS stepped up to be net control operators for the last two Friday SNARS noon Nets.

This is Mckenzie, KJ7IRT.



I did the noon net on Friday December 20, 2019. It was so much fun to not only run the noon net but to be able to share information and meet different hams. I got to practice communicating over the radio and I got to communicate with so many people. Some I had talked to over the radio before, and some I had met in person in classes and such. I could connect names and call signs to the faces I remembered. I, of course, had a hiccup in the beginning where I accidentally switched frequencies mid transmission, but after that, it went smooth. It was such a learning experience about communicating and it was a different purpose to use my radio. I got to do something that I had heard others do and share the information which was exciting to get the message sent out.

This is KJ7IRS, Hunter.



This is KJ7IRS, Hunter. I ran the noon net on December 27, 2019. I enjoyed talking to other hams on the noon net. Running the noon net helped me get more comfortable with talking on the radio. Before I ran the net I was nervous, but talking with others slowly assuaged me. I was able to talk to more experienced operators that helped me with new information and compliments. I learn how to operate a radio when multiple people are calling you at once. Overall this experience was wonderful, and now I am more likely to talk on the radio more often.

Congratulations Hunter KJ7IRS and Mckenzie KJ7IRT. Please look for both of them as Co-NCO's this coming Friday January 3rd for the first Friday Noon Net of 2020.

ARRL Kids Day

Saturday, January 4th, 2020 9:30a - 2:30p

Cabela's Reno



This will be the 2nd year having January Kids Day at Cabela's on Saturday, January 4th, 2020 inside the front of Cabelas; 9:30a set-up, Kids Day 10a-2p, take down 2p - 2:30p. Please come and join SNARS for this fantastic youth event.

(Continued at the bottom of the next page.....)

FUN STUFF FOR JANUARY

Contests for January. Some of the better January contests are listed below. Those in **BOLD** are ARRL or NCJ sponsored, and may qualify for the Gavel Award. See <http://www.arrl.org/files/file/Contest%20Corral/2019/November%202019%20Corral.pdf> for a complete list of contests.

1 Jan 0000 to 1 Jan 2359 Straight Key Night <http://www.arrl.org/straight-key-night>

4 Jan 1800 to 4 Jan 22359 3.5, 7, 14, 18, 21, 24, 28, 144 repeaters
ARRL Kids Day Ph www.arrl.org/kids-day

4 Jan 1800 to 5 Jan 2359 3.5-28 ARRL RTTY Roundup Dig
www.arrl.org/rtty-roundup

8 Jan 2300 to 12 Jan 2300 1.8-7 AWA Linc Cundall Memorial CW Contest CW www.antiquewireless.org

11 Jan 1800 to 12 Jan 0559 1.8-28 North American QSO Party, CW
www.ncjweb.com

12 Jan 1400 to 15 Jan 0800 1.8-144 Classic Exchange, CW
www.classicexchange.org

18 Jan 1800 to 19 Jan 0559 1.8-28 North American QSO Party, SSB
www.ncjweb.com

18 Jan 1900 to 20 Jan 0359 50 and up ARRL January VHF Contest CW
Ph www.arrl.org/january-vhf

24 Jan 2200 to 26 Jan 2200 1.8 CQ 160-Meter Contest, CW
www.cq160.com

25 Jan 1900 to 26 Jan 1900 All (no WARC) Winter Field Day CW Ph Dig
www.winterfieldday.com

If you're not into contests, there's always DX to chase! January is a little thin, but the good stuff is scattered over the globe. Some of the better DX operations coming up in January:

Dec 28 to Dec 31 **Easter I CE0Y**

Dec 28 to Jan 02 **Algeria 7X7X**

Jan 02 to Jan 07 **Cyprus SBA ZC4UW**

Jan 03 to Jan 23 **Maldives 8Q7BS**

Jan 06 to Jan 12 **Palestine E44RU**

Jan 07 to Jan 13 **Palau T88AQ**

Jan 12 to Jan 31 **Norfolk I VK9NK**

Jan 20 to Feb 09 **Cocos I TI9**

There's more too! Check out: <https://www.ng3k.com/Misc/adxo.html>

NAME THAT RIG (from page 6)

Hallicrafters' first transmitter, the HT-1, clocked in at 115 lbs. Not something you'd want to drop on your foot. It was introduced in 1938, and went till 1939. It had an 814 tube for the final (a power pentode capable of well over 100W output), modulated by four 6L6 audio tubes. No VFO. A total of 14 tubes, and seven transformers contributed to its extreme weight. The HT-1 Looks like the top section of early BC-610 transmitters, manufactured by Hallicrafters for the US military in World War 2, but there's no similarity. The HT-1 was good for 100W on CW, and 50W on plate modulated AM, t10 through 40 meters. Few exist today.

"Hey mister is this a folding tower?"

(Photo and caption by Don Sherman W7SSB. Photo taken at the Lincoln swap meet)



ABOUT KIDS DAY

Twice a year, ARRL offers an event designed to promote Amateur Radio to our youth. Share the excitement with your kids or grandkids, a Scout troop, a church or the general public!



Kids Day is designed to give on-the-air experience to young people and hopefully foster interest in getting a license of their own. It is also intended to give older hams a chance to share their station and love for Amateur Radio with their children.

More information: <http://www.arrl.org/kids-day>

73, Barry K6ST

Nevada Section Youth Coordinator

ARRL (American Radio Relay League) arrl.org

FCC AMENDING RF EXPOSURE SAFETY RULES

Feed: American Radio Relay League | Ham Radio Association and Resources

Posted on: Thursday, December 5, 2019 3:21 PM

Author: American Radio Relay League | Ham Radio Association and Resources

Subject: FCC Amending Amateur Radio RF Exposure Safety Rules

The FCC is amending its Part 97 Amateur Service rules relating to RF exposure safety. In a [lengthy document](#) in ET Docket 19-226 released on December 4 that addresses a broad range of RF safety issues, the FCC said current amateur radio RF exposure safety limits will remain unchanged, but that the amateur-specific exemption from having to conduct an RF exposure evaluation will be replaced by the FCC's general exemption criteria. Radio amateurs have always had to comply with RF exposure limits, but certain stations have been exempt from having to conduct evaluations based only upon power and frequency. The Commission indicated that by and large, if an RF source was "categorically excluded" from routine evaluation under the old rules, it will most likely still be exempt under the new rules, which are expected to take effect in the next couple of months.

"For applicants and licensees in the Amateur Radio Service, we substitute our general exemption criteria for the specific exemption from routine evaluation based on power alone in Section 97.13(c)(1) and specify the use of occupational/controlled limits for amateurs where appropriate," the FCC said.

"The sky is not falling here," ARRL Lab Manager Ed Hare, W1RFI, commented. "The major aspects of the rules will not impose major new burdens on the Amateur Radio Service. As in all regulatory matters, though, the devil may be in the details, so the ARRL technical staff, legal staff, and the experts on the ARRL RF Safety Committee are carefully evaluating this FCC document."

Under the revised Section 97.13(c)(1), "In lieu of evaluation with the general population/uncontrolled exposure limits, amateur licensees may evaluate their operation with respect to members of his or her immediate household using the occupational/controlled exposure limits in Section 1.1310, provided appropriate training and information has been accessed by the amateur licensee and members of his/her household," the amended rule says.

"RF exposure of other nearby persons who are not members of the amateur licensee's household must be evaluated with respect to the general population/uncontrolled exposure limits. Appropriate methodologies and guidance for evaluating Amateur Radio Service operation is described in the Office of Engineering and Technology (OET) [Bulletin 65, Supplement B](#)," the revised rule concludes.

SNARS - Sierra Nevada Amateur Radio Society, Inc—<http://snars.org>

The FCC said it was not persuaded by ARRL's argument in its comments that the routine evaluation exemption for amateur radio stations operating below a certain power threshold should be maintained. "Amateur radio licensees operate a variety of installations of different size, power, and frequency, which can be located in close proximity to people, giving rise to various RF exposure concerns," the FCC noted.

In a meeting with FCC OET Chief Julius Knapp and senior staff in early November, ARRL asked the FCC to make available on the internet a calculator to facilitate making the correct calculations the rules require. ARRL said that would be preferable to unofficial third-party calculators, the results from which might not be accorded the same degree of deference in local disputes. Several software programs were suggested as models.

The FCC did not single out amateur radio in drafting its latest RF exposure rules. The rules affect multiple services, and exemptions for many other services were also deleted as part of a broader policy driven by a proliferation of RF devices, some resulting in situations where gain antennas are sited much closer to people than was expected in 1996 when the rules were last revised.

STRAIGHT KEY NIGHT IS ALMOST UPON US....

Starting at 4 PM local time PST December 31, or 0000Z January 1, 2020, Straight Key Night is probably the most popular ARRL non-contest event. It's a night for casual, friendly contacts, using only mechanical keys—no keyers, keyboards, or computer generated CW.



A Polechanger Key, vintage 1886, used by telegraph line repairmen. Courtesy WB2AWQ

SKN operations can be found on all bands, WARC included, although most occurs on 80 40 and 20 meters. It's a great place to jump in if you're just starting in CW, or to brush up on your code. Many ops will also be using vintage equipment. See <http://www.arrl.org/straight-key-night> for details. Be there, Jan 1, 0000Z to 2359Z!

SHORT TAKES

HAM RADIO NIGHT

First Wednesday, January 1, 2019, has been CANCELLED due to the holiday. It will resume on February 5 at 1800 at the REOC.

CONTEST CALENDAR

Some interesting contests are popping up in January. It starts this weekend with the RTTY Roundup. Full rules can be found at <http://www.arrrl.org/rtty-roundup>. January 18-19 is the North American QSO Party, SSB which has a power limitation of 100 watts. It is only for stations in North America, and as part of your exchange, you need to give your name and copy the other station's name. Full rules are at <http://www.ncjweb.com/NAQP-Rules.pdf>. The results have been posted for the NVQSO Party at <http://nvqso.com/>. We had about a 50% increase in logs sent in this year. Scores were much higher for all contestants thanks to about 60 Nevada hams that participated!

DX

There are some interesting ones on the air at this time. Palau will be on the air January 7-13 as T88AQ. AI6LY, who took Washoe County High Power SSB in the Nevada QSO Party from his vacation home in Incline, is headed to St Lucia as J6/AI6LY during Jan 6-11, give John a

call!!! There are lots of other stations and more can be found at <https://www.ng3k.com/Misc/adxo.html>

ARRL

In the near future QEX and NCJ will be available to all ARRL members on the web as part of their membership at no additional cost. There will be a charge for the printed versions.

FIELD DAY JUNE 26-28, 2020. We took FIRST PLACE last year in Nevada by almost double the score of the nearest other Nevada station. We hope to do this again this year! We are trying to get the main group area down by the boat launch again at Washoe Lake State Park as there are a lot of trees and a bigger shade area. We are going to continue our tradition of feeding the troops who come out and work, and we will have a big Tri-Tip dinner on Saturday Night for everyone. One major problem, Jon Fox, who has been our head chef for the last few years, will be at his other home in DU land (Philippines)... The Kitchen Crew is really the most important part of the weekend as they will keep the operators fat and happy, and that will translate into lots of contacts! We need volunteers for this crew—If you are interested, contact W6US at nvjms@gmail.com.

ARES NEWS

ANNUAL COMMUNICATIONS EVENTS CALENDAR 2020:

Carson Valley, Tahoe, Reno, Plumas Co.

NOTE: Plumas ARC always have a need for operators. Go over to some beautiful country and help out the Plumas Amateur Radio Club

EVENT 2019	DATE	DATE END	SPONSOR/ORGANIZER	COORDINATOR	CONTACT
Silver State 50/50 race	5/16/20		Silver State Striders	Steve KS6A	ks6a@sbcglobal.net
Indian Valley Century Bicycle Ride??	5/24/20		Plumas ARC	Larry Trotter KI6YUK	dltrotter@sbcglobal.net
Pony Express Re-Ride	6/3/2020	6/13/20	SIERA	Jeff Cauhape K7BCV	j_cauhape@yahoo.com
Lost and Found Gravel Grinder SBTS	6/6/20		Plumas ARC	Larry Trotter KI6YUK	dltrotter@sbcglobal.net
America's Most Beautiful Bike Ride	6/7/20		Tahoe Amateur Radio Assn	Paul Gulbro, WA6EWV	wa6ewv@juno.com
Truckee Dirt Fondo Bike Ride	6/13/20		John Prouty; Bike Monkey	Bob Miller WA6MTY	wa6mtty@gbis.com
Alta Alpina Challenge	6/27/20		Alta Alpina Cycling Club	Jennie Hamiter, KE7YBA	jenniehamiter@mac.com
Death Ride	7/11/20		Tahoe Amateur Radio Assn	Paul Gulbro, WA6EWV	wa6ewv@juno.com
Tahoe Rim Trail	7/17/20	7/19/19	Tahoe Mountain Milers	Bob Miller WA6MTY	wa6mtty@gbis.com
Running With the Bears	8/15/20		Plumas ARC	Larry Trotter KI6YUK	dltrotter@sbcglobal.net
Vegas to Reno Off Road Race	8/12/20	8/15/19	Best in the Desert Racing Assn	Keith KC7HTK	kc7htkeith@hotmail.com
Tour De Tahoe	9/13/20		Tahoe Amateur Radio Assn	Paul Gulbro, WA6EWV	wa6ewv@juno.com
Reno Air-Races	9/16/20	9/20/19	WC-ARES	Bob Miller WA6MTY	wa6mtty@gbis.com
Edible Pedal 100	9/20/20		Sunrise Rotary Club	Bob Miller WA6MTY	wa6mtty@gbis.com
Bear Growl Gravel Grinder	9/12/20		Plumas ARC	KJ6CUG	dltrotter@sbcglobal.net
Stetina Paydirt	9/19/20		John Prouty; Bike Monkey	Bob Miller WA6MTY	wa6mtty@gbis.com
Grinduro SBTS	TBD		Plumas ARC	Larry Trotter KI6YUK	dltrotter@sbcglobal.net
Nevada Day Parade	10/31/20		NV AREA NW DEC	John Abrott KD7NHC	jabrott77@gmail.com , cell 775 790-1739.
Turkey Trot	11/26/20		WC-ARES	Bob Miller WA6MTY	wa6mtty@gbis.com

This frequency chart is what we use from the National Weather Service when NWS activates SKYWARN. With our severe thunderstorms these are the frequencies we will use. There is a SKYWARN Class scheduled for Friday at NVCON.



WCARES



COUNTY	MEMORY	REPEATER	PL	NOTES:
Alpine, Ca	13	147.330	123.0	Leviathan, Minden, Carson, Alpine Co
	4	146.940	123.0	Snow Valley Pk Covers S&E Reno, Washoe, Carson, Minden, and Whole Lake Tahoe
	10	147.240	100.0	Heavenly Valley Heavenly Vly, Most Lake, into Sacramento
	11	147.270	123.0	McClellan Pk Covers Carson, Douglas, Dayton, Silver Springs
	2	146.865	123.0	Leviathan Covers Alpine and Douglas
Churchill	7	147.150	123.0	Mt Rose Covers S Reno, Washoe, Carson, Douglas, S&W Lake Tahoe
	9	147.210	100.0	Peavine Pk
	6	147.030	123.0	Virginia Pk Mt Rose System
	8	147.180	107.2	Virginia Pk Covers Reno, Spanish Springs, Churchill Co, Gerlach, Black Rock, Susanville (scratchy)
	5	146.970	100.0	Eagle Covers Silver Springs and Fallon
Carson City	1	146.610	123	Ophir Pk (Dayton, Stagecoach, Silver Springs, Fallon, Lovelock)
	4	146.940	123	Snow Valley Pk Covers S&E Reno, Washoe, Carson, Minden, and Whole Lake Tahoe
	14	147.390	123.0	Ophir Pk (Dayton, Stagecoach, Silver Springs, Fallon, Lovelock)
	11	147.270	123.0	McClellan Pk Covers Carson, Douglas, Dayton, Silver Springs
Douglas	13	147.330	123.0	Leviathan Pk, Minden, Carson, Alpine Co
	11	147.270	123.0	McClellan Pk Covers Carson, Douglas, Dayton, Silver Springs
	10	147.240	123.0	Heavenly Valley Pk Heavenly Vly, Most Lake, into Sacramento
	2	146.865	123.0	Leviathan Covers Alpine and Douglas
Eldorado, Ca	10	147.240	123.0	Heavenly Valley Pk Heavenly Vly, Most Lake, into Sacramento
Lassen, Ca	8	147.180	107.2	Covers Reno, Spanish Springs, Churchill Co, Gerlach, Black Rock, Susanville (scratchy)
Lyon	5	146.970	100.0	Lahontan (Silver Springs, Fallon)
	1	146.610	123.0	Ophir Pk (Dayton, Stagecoach, Silver Springs, Fallon, Lovelock)
	7	147.150	123.0	Mt Rose (Silver Springs, Yerington, Smith Valley)
Mineral				
Modoc, Ca				
Mono, Ca				
Nevada, Ca	7	147.150	123	Mt Rose Covers S Reno, Washoe, Carson, Douglas, S&W Lake Tahoe
Pershing	6	147.030	123	Virginia Pk Mt Rose System
	8	147.180	107.2	Virginia Pk

Pershing	6	147.030	123	Virginia Pk Mt Rose System
	8	147.180	107.2	Virginia Pk
Placer, Ca	10	147.240	123	Heavenly Valley Pk Heavenly Vly, Most Lake, into Sacramento
Plumas, Ca	7	147.150	123	Mt Rose Covers S Reno, Washoe, Carson, Douglas,S&W Lake Tahoe
	9	147.210	100	Peavine Pk
Sierra, Ca	7	147.150	123	Mt Rose Covers S Reno, Washoe, Carson, Douglas,S&W Lake Tahoe
	13	147.330	123	Leviathan Pk, Minden, Carson, Alpine Co
Storey	7	147.150	123	Mt Rose Covers S Reno, Washoe, Carson, Douglas, S&W Lake Tahoe
	9	147.210	100	Peavine Pk
	6	147.030	123	Virginia Pk Mt Rose System
	8	147.180	107.2	Virginia Pk
	1	146.610	123	Ophir Pk (Dayton, Stagecoach, Silver Springs, Fallon, Lovelock)
	14	147.390	123	Ophir Pk (Dayton, Stagecoach, Silver Springs, Fallon, Lovelock)
		146.850	123	Storey County ARES
Washoe	7	147.150	123	Mt Rose Covers S Reno, Washoe, Carson, Douglas,S&W Lake Tahoe
	9	147.210	100	Peavine Pk
	6	147.030	123	Virginia Pk Mt Rose System
	8	147.180	107.2	Virginia Pk
	1	146.610	123	Ophir Pk (Dayton, Stagecoach, Silver Springs, Fallon, Lovelock)
	14	147.390	123	Ophir Pk (Dayton, Stagecoach, Silver Springs, Fallon, Lovelock)
EchoLink and IRLP	3	146.895	100	KA7ZAU Peavine Pk (Node #357948?#73 to clear #15 to activate #73 when done))
	12	147.300	123.0	Grand Sierra Resort Node #7873)
DMR		TALK GRPS		SNARS and/or NEVADA

Yellow highlighted are linked repeaters

Feb 15 is my next "One Day Ham Cram" review of the Technician or General Test to prepare to take the test the same day.

Attendees MUST register on www.snars.org/oneday. Please be advised the cost to have the handouts printed has gone up to \$10.

I have 10 ARRL Technician Manuals (FOURTH Edition) for \$25 instead of \$32 plus shipping.

WARNING if you order from AMAZON you may not receive the latest version they won't order more until they use up their inventory.

Happy New Year.

Bob WA6MTY Emergency Coordinator Washoe County ARES
775 843-5952 wa6mty@gbis.com

THE BANDS ARE DEAD.....OR ARE THEY?

Part two!

The ARRL 10-Meter contest is held the second full weekend of each December. This year it was December 14-15, 2019, from 0000 UTC Saturday; runs through 2359 UTC Sunday. The operating conditions were poor to fair, depending on what mode was being used. CW contacts were predominate, as CW is received more easily in poor conditions. Operating out of Dayton, Nevada, KF7KTC was able to make some phone contacts in the Western US Region using a dipole and 100 watts (low power).

Even in times of low solar activity, Technician operators can still have fun and make contacts in their segment of the 10-Meter spectrum. It helps keep their operating skills sharp, and contributes to the overall scope of the contest.

Here are the raw results for the Nevada Section for the 2019 ARRL 10-Meter Contest:

Call Sign	Category	Raw Score	Section	Club
K7STU	Single Operator, Phone Only, High Power	360	NV	
K7XC	Single Operator Unlimited, Mixed Mode, High Power	17,748	NV	Northern California Contest Club
KF7KTC	Single Operator, Phone Only, Low Power	20	NV	Sierra Nevada ARS
N7XCZ	Single Operator, Mixed Mode, Low Power	768	NV	
N7YK	Single Operator Unlimited, CW Only, Low Power	13,312	NV	
W7EB	Single Operator, Phone Only, High Power	110	NV	
W7RN	Single Operator Unlimited, CW Only, High Power	25,212	NV	Northern California Contest Club

SIERA (SIERRA INTERMOUNTAIN EMERGENCY RADIO ASSOCIATION) VE TESTING

From kg7d@frontier.com at SIERA

I see our exam session information is no longer on the web site. So I'm sending out my teams exam information for 2020 in hopes you will add it to your web site.

Our team had increased our session attendance by 204% in the last two years. While the national average is 1.2% for the same period. More new hams means more help at events, more contacts in the log, and more fun in ham radio for all of us. As you may or may not know Bill - NN7K and I have spoke on many occasions and are in agreement that we are working together to promote the same goal. My team also promotes SNARS at our sessions. Not only in our question and answer sessions, but I include membership brochures in our new hams package. One of my VEs, David - AG7TX, Also host a New Hams Workshop. A hands on workshop for newly licensed or inexperienced hams. Kind of a, I got the license, what do I do now? Usually very basic stuff. Repeater etiquette, when and how to use simplex rather than a repeater, how to push the PTT for the first time and make your first contacts, how to program your radio. We assist them in learning how to program their own radio by hand. *Not much good if you can't input a repeater on the fly.* Reasons to upgrade to General class is also included. However the workshop does change with each group and what ever their questions and needs are. One of the workshops last year was all new General class operators wanting to know how to get started in HF. Each one made their first HF contacts that day. The workshops are typically are two weeks after our exam session. This gives new licensees time for their call sign to post, and time to relax and think about questions they have. If this is of interest to your group I can have Dave include you when he sends out announcements for the next workshop.

Anyway here's our session info for 2020, *please note changes from the previous year include my call sign and my e-mail address:*

When: 9:00 AM Saturday ; January 18, March 21, May 16, July 18, Sept 19, Nov 21. (3rd Saturday of odd numbered months)

Where: Fire Station 51
[777 S. Stewart Street.](#)
Carson City, Nevada
Parking and entry are on the back side by the fire museum.

What you need: A photo ID, \$15.00 cash or personal Check (*We can't take Cards*), and a copy of your current license if you upgrading (*a Reference copy from the FCC web site is acceptable, it doesn't have to be the Official copy*)

I also always suggest you bring an extra \$15.00. Its a big question pool and for most of us there's always a chance of getting all the questions you don't know. For a second fee we will give you another test. We've had many people do this and pass with flying colors.

Continued on next page.....)

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Contact: Please contact Greg at KG7D@arrrl.net so we can prepare for the correct amount of candidates, or with any questions you might have. Please let Greg know you heard about the exam on the SNARS web site.

Additional information: If you would like to stay for it, after the exam session we have a question and answer session. Our experienced VE's will assist you with whatever questions you might have about getting started with ham radio or any another part of ham radio. If you've purchased a new radio and need help programing it. Bring it! We will gladly assist you in learning how to program it. If someone is ready to take the test, and needs to take the exam while its fresh in their mind. Contact Greg, he might be able to arrange a special session.

Greg Moore KG7D kg7d@frontier.com



**The Nevada Division of Emergency Management
Churchill Amateur Radio Society in partnership with the
State of Nevada Emergency Communications Center
is pleased to offer:**

C4FM Yaesu System Fusion Training

The C4FM Yaesu System Fusion Training will last approximately 3 hours and go from entry level overview of the product line, local systems/network available through CARS, basic Fusion technology, and then progress into advanced radio features, Wires-X, Personal Digital node and hotspot setup/usage.

This seminar will not cover anything APRS, DMR, D-Star, P25 related.

For more information on Churchill Amateur Radio Society, please visit www.NVCARS.org.

WHEN: January 18, 2020, 9:00 AM -11:00 AM (3 hours)

WHERE: Nevada Division of Emergency Management 2478 Fairview Drive Carson City, NV 89701 ID required at time of check-in

Anyone wishing to attend will need to sign up on via the Nevada Division of Emergency Management training website at:

<https://docs.google.com/forms/d/1OJC-3PzJ-JWpYGq93DrBdN5j8QZanI9qAGVy6JnZgGw/edit>

The Course is listed under Communications & Interoperability (B) Code. confirmation will be emailed to you approximately one week prior to the training date.

Applicants experiencing difficulties registering online should call NDEM Training: Darlene Loff, Support Specialist at dloff@dps.state.nv.us or (775) 687-0374.

Nevada Division of Emergency Management Point of Contact:

For additional course information contact Robert Plant at (775) 687-0331 or by email at rplant@dps.state.nv.us. Immediately following completion of the seminar, we will proceed to the Round Table Pizza located on College Parkway in Carson City for a dutch treat lunch social gathering. Anyone is welcomed to attend this training.



Board of Directors Meeting Minutes

November 13, 2019 - 6:00 PM

Chin Chin, 222 Los Altos Pkwy, Sparks

Anthony Marcin, W7XM P

Barry Bettman, K6ST P

John Miller, N7JDM P

Bill Jones, AE7OX P

John Byerly, N7ROJ P

Wes Vick, KG7QXE P

Jim Shepherd, W6US P

Doug Edmondo, W7DBE
P

Nill Nichols, NN7K P

2. Approval of minutes

- A. Approval of the minutes. Approved with one change re the 50 / 50 award
- B. Approval of Agenda. Approved

3. Reports

A. President's Report – Very pleased with the electronic election and received positive feedback. Also received positive feedback on the 50 / 50.

B. Secretary Report

- 1. Status Report – Working on membership items and the new Web Page

C. Membership Coordinator

- 1. Membership Status – One new member, stats online are upto date

D. Treasurer

- 1. Financial Report. - submitted bank statements for board review.
- 2. Checking: \$6,191 Savings: \$9,296 Paypal: \$1,415 Conv: \$4,295 Self-Ins: \$6,856
- 3. YTD Income is \$1,482

E. Technical Team - Report

- 1. Status Report Other than working a noise issue on Ophir all is good. John / Pat going to GSR during Christmas break to hook up internet on that server.

F. Control Operators / Trustee

- 1. Status Report - Control Operator and Trustee. Still need to hold a control operator class. The paper version of the "Trustee Book" is being scanned in by John.

G. Events

- 1. NVCON 2020 Discussion – Tony provided a hisotrical perspective. Additional discussion ensued on possibly waiting for 2021 for the next convention with a local / educational focus.
- 2. NVQSO – No further update, John B. Thanked Jim for his efforts.

3. Spring Ham Swap – Lots of interest in having one which is separate from any NVCON Swap. John B. Has six volunteers to work this – maybe combine with a club BBQ in May?
4. Field Day 2020 - 4th weekend in June, Jim S. Will make reservation on Jan 2nd. Jim can help but put a call out for help! Needs to be a team effort.

H. Education Activities

1. Status Report – No January Tech meeting on the 1st
2. Youth involvement. - Discussed helping the UNR radio club. Youth on the air Jan 4th at Cabellas. Noted that Barry will have new young HAMS run noon net the end of the month. Meadowwood Mall might be interested in doing something with the club.

I. Noon Net

1. Status Report - Net Manager. No new status

J. New Business

1. Breakfast Meeting - Discussion/Possible Action. John Miller looked at the Best Western in Sparks by the Nugget. Currently in renovation and might be a suitable replacement to Boom town.
1. Las Vegas Meetup / Activities - Discussion/Possible Action – Tony will set something up with the Las Vegas SNARS members.

K. Public Comments

1. Open for comments from the board of directors or the general membership and guests in attendance. No comments from Doug. Bill suggests adding “Old Business” to the Agenda. Asked about the equipment inventory (Online) Barry thanked the Board.

L. Adjournment of the board of directors

1. Next Meeting: Jan 8th at Chin Chin
2. Call for Adjournment.